

DOCKET NO. D-2003-29 CP

DELAWARE RIVER BASIN COMMISSION

Ground Water Protected Area

**Schwenksville Borough Authority
Ground Water Withdrawal**

**Borough of Schwenksville, Perkiomen Township and Lower Fredrick Township,
Montgomery County, Pennsylvania**

PROCEEDINGS

This is an application referred to the Commission, pursuant to an Administrative Agreement under Section 2-3.4 (a) and 2-3.7 of the *Administrative Manual - Part II, Rules of Practice and Procedure*, by the Pennsylvania Department of Environmental Protection (PADEP) on December 22, 2003, for an allocation of ground water and review of a ground water withdrawal project in the Ground Water Protected Area of Southeastern Pennsylvania. The project wells were reviewed under the Pennsylvania Safe Drinking Water Act for a public water supply construction permit and approved by the PADEP on December 18, 2003, but it is withholding its permit (No. 4603505) until the project approved by the Delaware River Basin Commission (DRBC).

The application was reviewed for inclusion of the project in the Comprehensive Plan and approval under Section 3.8 and for a withdrawal permit under Section 10.3 of the Delaware River Basin *Compact*. The Montgomery County Planning Commission has been notified of pending action on this docket. A public hearing on this project was held by the DRBC on January 21, 2004.

DESCRIPTION

Purpose-- The purpose of this project is to add new Well No. 9 to the Schwenksville Borough Authority (SBA) public water supply distribution system.

The proposed total allocation of ground water is an increase in allocation from 11.8 to 14.8 million gallons per 30 days (mg/30 days).

Location.-- The project wells are located in the Perkiomen Creek watershed as follows:

WELL NO.	LATITUDE (N)	LONGITUDE (W)
3	40° 15' 48"	75° 28' 08"
4	40° 15' 42"	75° 28' 12"
5	40° 15' 30"	75° 27' 53"
6 (standby)	40° 15' 23"	75° 27' 53"
7	40° 16' 48"	75° 28' 30"
9 (proposed)	40° 16' 37"	75° 29' 33"

The wells are located in the Brunswick Formation.

Well No 6 is currently not utilized due to poor water quality and has been placed on standby.

Area served.—The SBA provides public water supply to the Borough of Schwenksville, Perkiomen Township and Lower Frederick Township as described on plans previously submitted.

Physical features.--

a. **Design criteria.**—The SBA currently serves an estimated population of 5,543 with an average and maximum demand of 11.37 mg/30 days and 11.76 mg/30 days, respectively. The SBA projects a year 2013 population of 6,026 with an average and maximum demand of 12.36 mg/30 days and 14.80 mg/30 days, respectively.

b. **Facilities.** – The applicant's existing and proposed wells have the following characteristics:

WELL NO.	DEPTH	CASED DEPTH/ CASING DIAMETER	PUMP CAPACITY	YEAR DRILLED
3	312'	---	40 gpm	1922
4	502'	41'/8"	42 gpm	1936
5	300'	35'/8"	175 gpm	1964
6 (standby)	375'	52'/8"	200 gpm	1976
7	406'	44'/10"	200 gpm	1987
9 (proposed)	364'	102'/10"	70 gpm	2002

All wells and all water service connections are metered.

Water withdrawn from Well No. 7 is treated for iron and manganese, and water withdrawn from all wells is chlorinated prior to entering the distribution system.

SBA's storage facilities have a combined capacity of 950,000 gallons, or approximately 2.5 days of supply.

The project facilities are above the 100-year flood elevation.

The water system is not presently interconnected with any other distribution system.

c. **Other.**-- Wastewater is either discharged to on-lot disposal systems or conveyed to one of three separate sewage treatment facilities: SBA, Lower Frederick Township Authority (LFTA) or Montgomery County Sewer Authority (MCSA). The SBA NPDES Permit No. PA0020303 was renewed most recently on October 5, 1990, and a draft renewal NPDES Permit to increase discharges from 0.206 million gallons per day (mgd) to 0.3 mgd was issued to SBA on June 17, 1997. The SBA, LFTA, and MCSA sewage treatment facilities were most recently approved under Section 3.8 of the Compact by DRBC Dockets Nos. D-98-30 CP, D-78-41 CP and D-87-6 CP on May 31, 2002, July 25, 1979 and February 25, 1987, respectively. The treatment facilities have adequate capacity to receive waste water from the proposed project.

Cost.-- The overall cost of this project is estimated to be \$260,000.

Relationship to the Comprehensive Plan.—The SBA existing wells were previously included in the Comprehensive Plan by Dockets Nos. D-78-33 CP, D-87-71 CP and D-92-39 CP.

FINDINGS

The project is located within the Southeastern Pennsylvania Ground Water Protected Area delineated by the DRBC pursuant to *Compact* Section 10.2. Tests conducted by the applicant indicate the operation of this project will not create a local water shortage nor conflict with requirements of the Comprehensive Plan.

Review and analysis of the application pursuant to Section 6.D. of the Ground Water Protected Area Regulations (GWPAR) result in the following:

1. The proposed withdrawal is consistent with the Commission's Comprehensive Plan and the policies and purposes of these regulations.

2. Opportunities to satisfy water requirements on a timely basis from existing available supplies and facilities have been explored and are being utilized. The SBA currently maintains an interconnection with Pennsylvania Suburban Water Company for up to 100,000 gpd.

3. The proposed withdrawal, in conjunction with other withdrawals in the applicable ground water basin, should not exceed withdrawal limits of the ground water basin, aquifer or aquifer system.

4. The proposed withdrawal should not significantly impair or reduce the flow of perennial streams in the area.

5. Existing ground and surface water withdrawals should not be adversely impacted, or will be otherwise assured of adequate supplies in accordance with the requirements of Section 10 of the GWPAR. There have been no reported complaints of well interference since the 1998 approval of this renewal project.

6. The proposed withdrawal should not cause substantial, permanent adverse impact to the overlying environment.

7. The owner or sponsor has adopted and will implement conservation and management programs as required by Section 7 of the GWPAR.

The project does not conflict with the Comprehensive Plan, and is designed to prevent substantial adverse impact to the water resources related environment, while sustaining the current and future water uses and development of the water resources of the Basin.

The SBA Wells Nos. 3, 4 and 5 are located in the Perkiomen Deep Creeks subbasin, where total net annual ground water withdrawal (399 mgy) is less than the withdrawal limit set in Section 6.I of the GWPAR (1396 mgy). The SBA Wells Nos. 7 and 9 are located in the Swamp-Scioto Creeks subbasin, where total net annual ground water withdrawal (136 mgy) is less than the withdrawal limit set in Section 6.I of the GWPAR (994 mgy). The applicant is requesting an annual allocation of 178 mgy, 142 mgy of which is already included in the above-stated total net annual ground water withdrawals for the two subbasins. Therefore, the increase in allocation associated with this project results in an additional 36 mgy withdrawal from the Swamp-Scioto subbasin. Since the withdrawals are not 100% consumptive, a fraction of the withdrawal will be returned to ground water. However, even if no water from this project were returned to ground water, the total net annual ground water withdrawal from this subbasin would remain below the withdrawal limits set in Section 6.I of the GWPAR. Therefore, the proposed withdrawals from all the SBA wells, in conjunction with other withdrawals in the subbasin, are in accordance with the requirements of Section 6.I of the GWPAR.

A 48-hour pump test was conducted on proposed Well No. 9 from September 23 to September 25, 2002 in accordance with a pre-approved Pumping Test Plan submitted to PADEP and DRBC. The pump tests were conducted to satisfy PADEP and DRBC regulatory requirements to assess the water quality, estimate the long-term yield of the production wells and hydraulic characteristics of the aquifer, and to evaluate potential well interference effects. The 48-hour pump test on Well No. 9 was conducted at an average rate of 97 gpm, which is equivalent to approximately 1.4 times the proposed permitted allocation for Well No. 9. At the end of the pump test, the water level in Well No. 9 decreased by approximately 60.92 feet. Well No. 9 recovered to approximately 72 percent of static water level approximately 20.7 hours after the end of the 48-hour pump test, indicating very slow recovery, very likely due to the drought conditions prevalent at the time of the pump test. Based on the results of the pump tests, drawdown in Well No. 9 was stabilized during the constant rate test and the well can sustain a long-term pumping rate of 69.4 gpm.

The observation well network for the long-term pumping test of Well No. 9 included the production well, three unused test wells/observation wells installed by SBA, designated PVMS-A, PVMS-B and PVMS-C, and four residential wells, designated Parsonage, Church, Naomi Rose and David Rose. Background monitoring was conducted prior to the 48-hour pump test to evaluate natural ground water fluctuations. The most interference noted during the test (12.6 feet) occurred in PVMS-A, which is located approximately 720 northeast of Well No. 9, and along strike of the bedrock formation. Well PVMS-A is an observation well and does not provide water supply to any residential user. Water level monitoring during the pumping test for Well No. 9 did not indicate significant drawdown impacts from pumping of proposed production Well No. 9 in the four residential wells. Based on the pump test and monitoring data, pumping from Well No. 9 at the permitted allocation, is not expected to result in adverse impacts to nearby wells. However, in order to provide an additional margin of safety and assess effects of combined pumping over an extended period of time, a long-term monitoring program is recommended, and is outlined in the DECISION section of this docket.

Project withdrawals are used for the purposes of public water supply and the consumptive use is estimated to be 10 percent of the total water use.

DECISION

I. Wells Nos. 3, 4, 5, 7 and 9, as described above, are hereby added to the Comprehensive Plan.

II. The previous approvals granted under Sections 3.8 and 10.3 of the *Compact* for the SBA Wells are hereby rescinded.

III. The project as described above is approved pursuant to Section 3.8 of the *Compact* and is granted this withdrawal permit pursuant to Section 10.3 of the *Compact*, subject to the following conditions:

- a. Approval is subject to all conditions imposed by the PADEP.
- b. The wells shall be available at all times for inspection by the DRBC.
- c. The wells shall be operated at all times to comply with the requirements of the ground water policies and standards of the DRBC.
- d. During any 30-day period, the withdrawal from proposed Well No. 9 shall not exceed 3 million gallons and the total withdrawal from all wells shall not exceed 14.8 million gallons.
- e. The proposed well shall be equipped with readily accessible capped ports and drop pipes so that water levels may be measured under all conditions. Existing wells are to be similarly equipped, where possible, with readily accessible ports and drop pipes as repairs or modifications are made at each existing well.
- f. The project diversions shall be metered with an automatic continuous recording device that measures to within 5 percent of actual flow. An exception to the 5 percent performance standard, but no greater than 10 percent, may be granted if maintenance of the 5 percent performance is not technically feasible or economically practicable. A record of daily withdrawals shall be maintained, and monthly totals shall be reported to the Bureau of Watershed Management, PADEP annually and shall be available at any time to the Commission, if requested by the Executive Director.
- g. Each new water service connection shall include a water meter in accordance with the DRBC's Resolution No. 87-7 (Revised). Water charges for each service connection shall be based in part on metered usage.
- h. The applicant shall implement its Water Conservation Plan as approved by PADEP, and will report to the PADEP on the actions taken pursuant to this program and the impact of those actions as requested by that agency.
- i. No water service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).
- j. The applicant shall implement to the satisfaction of the Bureau of Watershed Management, PADEP, a drought or other water supply emergency plan.
- k. A long-term monitoring program is required to obtain data on ground water and surface water hydrologic conditions in the project area. The applicant shall implement the long-term monitoring program as outlined in a report entitled "Production and Observation Well Monitoring Plan" submitted by the applicant on December 22, 2003. This program will include the following:

1. Ground Water Level Monitoring – SBA will monitor nine private/observation wells identified in the above-referenced report to estimate annual ground water fluctuations caused by seasonal changes and/or production well pumping, and detect water level declines that may affect the performance of public and private wells in the area of Wells Nos.3, 4, 5, 6, 7 and 9.

2. Reports -- All monitoring data, including records required in Conditions "f." and "k." herein shall be available to the Commission if requested by the Executive Director.

l. A report shall be prepared by a hydrogeologist on the effects of well withdrawals on hydrogeologic conditions in the area and submitted annually, beginning one month after the first year of operation.

m. The Executive Director may modify the monitoring program or temporarily suspend or modify this docket at any time if review of the hydrologic data and/or any other information indicates such action is necessary.

n. Sound practices of excavation, backfill, and reseedling shall be followed to minimize erosion and deposition of sediment in streams.

o. No new water service connections shall be made to premises connected to sewerage systems which are not in compliance with all applicable water quality standards of the Commission.

p. Nothing herein shall be construed to exempt the applicant from obtaining all necessary permits and/or approvals from other State, Federal, or local government agencies having jurisdiction over this project.

q. Upon completion of construction of the approved project, the applicant shall submit a statement to the DRBC, signed by the applicant's engineer or other responsible agent, advising the Commission that the construction has been completed in compliance with the approved plans, giving the final construction cost of the approved project, and the date the project is placed in operation.

r. This approval shall expire three years from the date below unless prior thereto the applicant has commenced operation of the subject project or has expended substantial funds (in relation to the cost of the project) in reliance upon this approval.

s. The area served by this project is limited to the service area as described above. Any expansion beyond this area is subject to review in accordance with Section 3.8 of the *Compact* and the GWPAP.

t. This approval will be reviewed within ten years of the date of approval, and unless renewed, this approval shall expire ten years from the date of approval.

u. The issuance of this withdrawal permit shall not create any private or proprietary rights in the water of the Basin and the Commission reserves the right to amend, alter, or rescind any actions taken hereunder in order to insure the proper control, use, and management of the water resources of the Basin.

v. If the monitoring required herein, or any other data or information demonstrates that the operation of this project significantly affects or interferes with any domestic or other existing wells or surface water supplies, the applicant, at its own cost, shall investigate valid complaints by users of wells or surface water supplies within the zone of influence of the diversion. Any well or surface water supply which is substantially adversely affected, or rendering it dry or otherwise unusable as a result of the applicant's project diversion, shall be repaired, replaced or otherwise mitigated at the expense of the applicant in accordance with Section 10B of the GWPAR. A report of investigation shall be submitted to the Executive Director of the Commission as soon as practicable. The Commission shall make the final determination regarding the validity of such complaints, the scope or sufficiency of such investigations, and the extent of appropriate mitigation measures, if required.

w. For the duration of any drought emergency declared by the Commission, water service or use by the project applicant pursuant to this approval shall be subject to the prohibition of those nonessential uses specified by the Bureau of Watershed Management, PADEP to the extent that they may be applicable, and to any other emergency resolutions or orders adopted hereafter.

x. No water service connections shall be made to newly constructed premises with plumbing fixtures and fittings that do not comply with water conservation performance standards contained in Resolution No. 88-2 (Revision 2).

BY THE COMMISSION

DATED: